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CR - 131298

Geology-Geography Department
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January 29, 1973
Type I Progress Report #1

- a. TITLE: Compile Two Photomaps of the State of Nevada (4236)
- b. PRINCIPAL INVESTIGATOR: Joseph Lintz, Jr. (U-139)
- c. The work statement for this project indicated the desirability of creating a negative mosaic for each wave-band for the entire project area of the State of Nevada. The cementation of the transparencies to each other in a fashion that the boundaries between adjacent segments is minimized is emerging as a problem. Cement limited to the edge of the transparencies is not deemed to possess sufficient strength to withstand commercial handling of the masters. We now envision the necessity of utilizing some substrate, glass or mylar, and we are facing the problem of dispersing the cement between negatives and substrate with even thickness and continuity. Currently a literature study is underway to learn how others may have approached this problem in the past. Some type of aerosol acetone cement will possibly be the answer, if we can find it on the market.

We are unable to locate any copies of Exhibit C (Article VII) for inputs to the NDPF and request one be sent immediately for compliance with this portion of our contract.

d. Accomplishments to date include:

1. indexing and filing of received dup positive negatives
2. selection of certain negs for 8x8" prints
3. preliminary identification of geologic phenomena including:
 - i. Activities of the AEC on the Nevada Test Site are, by and large, not identifiable.
 - ii. ten to twelve nearly circular geologic features with diameters of approximately 16-25 km are visible in several portions of the State. These features are probably of various origins including (a) erosion features of dark rocks overlying lighter colored rocks, fortuitously circular, and (b) probable volcanological collapse features (caldera) of mid to late Tertiary time, some of which have been mapped by the U.S.G.S., especially in southern Nevada.
 - iii. Apparent long lineations, some straight and some arcuate, in north central Nevada, probable fault lines.
4. Recruitment and hiring of a qualified research assistant who has just started working (part-time) on this project.

Planned for the next reporting period:

1. Geologic interpretations will be worked continuously in the coming months. Field checks of data will be made by Nevada Bureau of Mines and Geology employees during their normal field trips about the state to verify data extracted from the photo materials. Currently weather and snow conditions hamper some of this work and current field activity of the Nevada Bureau of Mines and Geology is at its lowest annual ebb.

Mackay School of Mines

Nevada Bureau of Mines . . Nevada Mining Analytical Laboratory
Chemical and Metallurgical Engineering Department . . Geology-Geography Department . . Mining Engineering Department

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COMPILE TWO PHOTOMAPS OF
THE STATE OF NEVADA Progress Report
(Nevada Univ.) 3 p HC \$3.00 CSCI 08B

2. The real work of mosaic compilation will get underway within the week.
 3. Multispectral analysis of selected frames of data will commence within two weeks. Originally planned and first to be performed will be the use of superposed images utilizing lantern slide projectors and color filter wheels.
- e. Results to date not considered significant.
 - f. No activities this category.
 - g. No recommendations this category.
 - h. No changes for standing order forms initiated.
 - i. ERTS Image Descriptor Forms will be completed and forwarded as rapidly as possible. We are unable to comply with this provision of the contract as apparently the form has never been received.
 - j. No Data Request Forms have been submitted to GSFC/NDPF during the reporting period.
 - k. No report required.

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"A School of Mineral Resources"

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Contract NAS5-21864
GSFC ID: U=139

ERTS Program
Phase II Data Analysis Plan

January 29, 1973

Phase II Preliminary Data Analysis

No major or basic changes of the Data Analysis Plan is contemplated from that established in the proposal. The Project is divided into two major components: cartographic and geologic.

No changes at all are contemplated in the cartographic sector.

A minor change in the multispectral analysis of geologic features will consist of the use of a multispectral analytical instrument for selected views, which will be used after analysis with the lantern slide projectors and colored wheels as contained in the proposal. The first utilization of such an analyzer will be in approximately one month's time and we anticipate continuing use on the order of about one day/month.

Joseph Lintz, Jr.
Principal Investigator

JL:jb

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NEVADA BUREAU OF MINES • NEVADA MINING ANALYTICAL LABORATORY
CHEMICAL AND METALLURGICAL ENGINEERING DEPARTMENT • GEOLOGY-GEOGRAPHY DEPARTMENT • MINING ENGINEERING DEPARTMENT